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(54) Title: METHOD AND SYSTEM FOR ANALYSING TACHOMETER AND VIBRATION DATA FROM AN APPARATUS HAVING ONE OR MORE ROTARY COMPONENTS

(57) Abstract: A method of analysing tachometer and vibration response data from an apparatus having one or more rotary components is provided. The method comprises the steps of: providing vibration response data and corresponding tachometer data from the apparatus for a period over which a rotary component of the apparatus varies in rotational speed, the tachometer data being for that component; repeatedly performing at intervals throughout the period the sub-steps of: determining a forcing frequency of the component from the tachometer data and a corresponding vibration response frequency of the apparatus from the vibration response data, comparing the forcing and vibration response frequencies to determine the relative phase difference between the frequencies, and determining the corresponding amplitude of the vibration response from the vibration response data; and plotting the relative phase differences and vibration amplitudes on a polar diagram. The plot trajectory is characteristic of the behaviour of the apparatus over the period.

WO 2004/090486 A1